

Serial No. 08/401,229

wafer when the hole is  
positioned over said section of  
the wafer.

*E!  
Could* <sup>38</sup> 37. The apparatus as claimed in claim <sup>37</sup> 76, wherein the hole  
is filled with a portion of a fiber-optic cable.

<sup>39</sup> 78. The apparatus as claimed in claim <sup>37</sup> 76, further  
comprising means for coordinating the generation of the laser  
beam with the position of the hole.--

#### REMARKS

Claims 17-35 and 37-78 are pending. New claims 76-78 have  
been added to cover additional embodiments, support for which can  
be found on page 14, lines 2-24 of the present specification.  
No new matter has been added.

Through the publication of European Application 0 738 561  
A1 (a copy of the front page is attached), applicant has  
discovered that Birang et al. filed two U.S. patent applications  
covering almost the identical subject matter of present claims  
76-78. Birang's applications are Serial No. 08/413,982 (filed  
on March 28, 1995) and Serial No. 08/605,769 (filed on February  
22, 1996).

As the present application has an effective filing date of  
December 28, 1992 (which precedes Birang's first filing date by  
more than two years), any patent issued on the present  
application would qualify as prior art against Birang's  
applications under 35 U.S.C. § 102(e).

Examiner Lee informed the undersigned during a telephone  
conference today (March 13, 1997) that the previous Amendment has  
already been considered and a final Office Action is forthcoming.  
The undersigned also determined today from the Group 2500  
Receptionist that the final Office Action has not yet been  
mailed. Applicant is not unmindful of the burden to the Examiner  
created by filing the present supplemental amendment to add more  
claims after the Examiner has already considered the previous  
claims. However, due to the urgency created by the discovery of

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Birang's pending applications and the importance of formally bringing these applications to the Examiner's attention, applicant decided it was necessary to file these claims by facsimile immediately without further delay. After receiving an action on these claims, applicant will determine whether to separate the issues in this case by filing a continuation application.

Applicant wishes to point out a typographical error on page 7 of the previous Amendment. The penultimate paragraph of page 7 should read "[a]ccordingly, withdrawal of the rejection under the second paragraph of 35 U.S.C. § 112 is requested" (the underlined portion was inadvertently omitted).

In view of the above amendments and remarks, favorable reconsideration and allowance of this application are requested. In the event that any issues remain, the Examiner is invited to telephone the office of the undersigned if it would expedite prosecution.

Respectfully submitted,

March 13, 1997

Date

Stephen B. Maebius

Stephen B. Maebius  
Reg. No. 35,264

FOLEY & LARDNER  
3000 K Street, N.W., Suite 500  
P.O. Box 25696  
Washington, D.C. 20007-8696  
(202) 672-5569

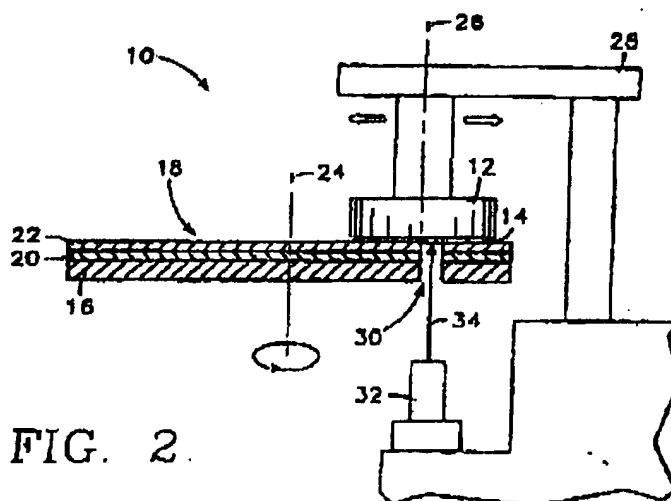
(11) **EP 0 738 561 A1**(12) **EUROPEAN PATENT APPLICATION**(43) Date of publication:  
23.10.1996 Bulletin 1996/43(51) Int Cl.<sup>5</sup>: **B24B 37/04, B24B 47/12,  
B24D 7/12, G01B 11/06**(21) Application number: **96302176.1**(22) Date of filing: **28.03.1996**(84) Designated Contracting States:  
**DE FR GB IT NL**(30) Priority: **28.03.1995 US 413982  
22.02.1996 US 605769**(71) Applicant: **APPLIED MATERIALS, INC.**  
**Santa Clara, CA 95054 (US)**(72) Inventors:  
• **Birang, Manoocher**  
**Los Gatos California 95030 (US)**

- **Johansson, Nils**  
**Los Gatos California 95032 (US)**
- **Gleason, Allan**  
**San Jose California 95112 (US)**
- **Pyatigorsky, Grigory**  
**Santa Clara, California 95051 (US)**

(74) Representative: **Baylles, Geoffrey Cyril et al**  
**BOULT, WADE & TENNANT**  
**27 Fumival Street**  
**London EC4A 1PQ (GB)**(54) **Apparatus and method for in-situ endpoint detection and monitoring for chemical mechanical polishing operations**

(57) The disclosure relates to an apparatus for chemical mechanical polishing (CMP) of a wafer, comprising: a rotatable polishing platen (18) with an overlying polishing pad (16) wetted with an abrasive slurry, the platen being rotatably mounted to a chassis; a rotatable polishing head (12) for holding the wafer (14) against the polishing pad, the wafer comprising a semiconductor substrate underlying an oxide layer; and an endpoint

detector. The detector comprises a laser interferometer (32) capable of generating a laser beam directed towards the wafer and detecting light reflected from the wafer, and a window (38) disposed adjacent a hole (30) formed through the platen, the window providing a pathway for the laser beam to impinge on the wafer at least during part of a period of time when the wafer overlies the window.

**FIG. 2.**

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